What is the Green Speed Cup?

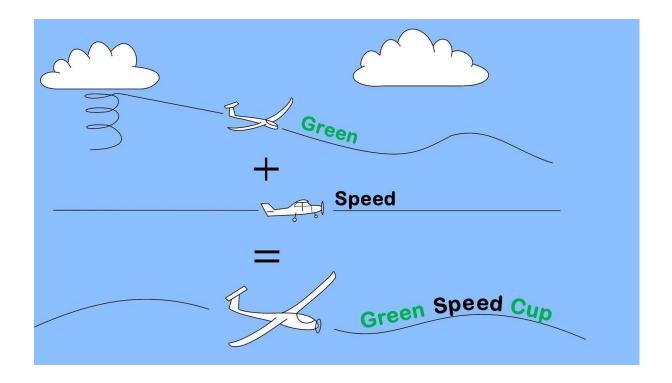
In times of steadily growing prices at the gas station, much has been done in the car industry to increase the efficiency (mostly measured in liters/100 km) of automobiles. This trend is visible in Commercial Aviation as well. Airlines demand from the manufacturer of modern aircrafts to decrease all kinds of emissions. The General Aviation is lagging behind this movement. That is reason enough for a change of mind. Saving fuel is the first step to get there.

New Impulses shall be given by the Green Speed Cup (GSC). Born out of an idea of three members of the <u>Akflieg Dresden</u>, this competition is supposed to bring innovation and efficient flying to the General Aviation.

As mentioned before, the competition is about saving fuel. But not just that, it is also about the biggest advantage of aircrafts over any other kind of transportation – the speed. The equation to calculate the GSC Points considers these parameters and it reads as follows:

$$GSC\ Points = \frac{Speed}{Fuel\ consumption}$$

Winning the Cup is only possible if you go fast and with a low fuel consumption. Besides the technology used, this could be also done using atmospheric energy from the vertical or lateral movement of air. Experiences from flying gliders are not required, but could proof to be helpful. Using the atmosphere can decrease the energy consumption significantly. An Example: Results from the 2012 Green Speed Cup show a fuel consumption of 2.5 l/100 km (1.06 gal/100 miles) at a speed of 142 km/h (77 knots) on one of the flights. That is about 2.5 times more efficient than a Toyota Prius, which is run at its optimum of 110 km/h (59 knots).



Before takeoff lateral winds can be obtained through regular weather forecasts and an optimum flight altitude can be determined. If necessary they can be altered when airborne. The problem is to combine all factors in one altitude. For example: The altitude where thermals are the strongest does not necessarily coincide with the altitude of the least headwind or the most tailwind.

At this Point the Green Speed Cup Team is trying to find solutions. It is a direct comparison of technologies, machines, materials and the capabilities of the pilots. The data recorded during the competition is being analyzed afterwards. This way flying techniques and single technological aspects can be extracted, that seem to be the most efficient. The goal is to develop an overall theory for the efficient motor flight.

Every propeller driven aircraft up to 2t MTOM is able to <u>participate</u>. That includes normal propeller driven aircrafts, Light Sport aircrafts as well as motorgliders.